What is claimed is:

1. An aerospace housing and shaft assembly comprising:

a housing;

a shaft rotatably mounted within said housing;

a seal assembly operatively positioned between said housing and said shaft, and having an inner diameter and an outer diameter, said seal assembly including:

a first seal ring mounted on said housing; and

a second seal ring mounted on said shaft in facing relation to said first seal ring, wherein one of said first seal ring and said second seal ring includes a surface defining a hydropad, said hydropad facing the other of said first seal ring and said second seal ring and being positioned such that it is exposed to ambientlow pressure air having a pressure substantially less than 14 psia .

2. An aerospace housing and shaft assembly as claimed in claim 1, wherein said hydropad is positioned to pump said low pressure air from the inner diameter of the seal assembly toward the outer diameter of the seal assembly.

3. An aerospace housing and shaft assembly as claimed in claim 2, wherein said low pressure air acts on the inner diameter of said seal assembly.

4. An aerospace housing and shaft assembly as claimed in claim 3, wherein the outer diameter of said seal assembly is exposed to lubricating fluid.

5. An aerospace housing and shaft assembly as claimed in claim 1, wherein said low pressure air is atmospheric air.

6. An aerospace housing and shaft assembly as claimed in claim 1, wherein said low pressure air has a pressure less than about 10 psia.

7. An aerospace housing and shaft assembly as claimed in claim 1, wherein said low pressure air has a pressure less than about 5 psia.

8. An aerospace housing and shaft assembly as claimed in claim 1, wherein said second seal ring comprises a ductile metallic material.

9. An aerospace housing and shaft assembly as claimed in claim 8, wherein said first seal ring comprises a carbon material.

Sub B2 10. A seal assembly adapted for use in an aerospace housing and shaft assembly having a housing and a shaft rotatably mounted within said housing, said seal assembly having an inner diameter and an outer diameter and comprising:

a first seal ring mounted on said housing; and

a second seal ring mounted on said shaft in facing relation to said first seal ring, wherein one of said first seal ring and said second seal ring includes a surface defining a hydropad, said hydropad facing the other of said first seal ring and said second seal ring and being positioned such that it is exposed to ambientlow pressure air having a pressure substantially less than 14 psia .

11. A seal assembly as claimed in claim 10, wherein said wherein said hydropad is positioned to pump said low pressure air from the inner diameter of the seal assembly toward the outer diameter of the seal assembly.

14 12. A seal assembly as claimed in claim 13 11, wherein said low pressure air acts on the inner diameter of said seal assembly.

15 13. A seal assembly as claimed in claim 12 10, wherein said low pressure air is atmospheric air.

16 14. A seal assembly as claimed in claim 12 10, wherein said low pressure air has a pressure less than about 10 psia.

17 15. A seal assembly as claimed in claim 12 10, wherein said low pressure air has a pressure less than about 5 psia.

18 16. A seal assembly as claimed in claim 12 10, wherein said second seal ring comprises a ductile metallic material.

13

19 ~~17~~. A seal assembly as claimed in claim 18 ~~16~~, wherein said first seal ring comprises a carbon material.

14

18. A method of producing a seal assembly having a seal ring, comprising the steps of:

positioning the seal ring in alignment with a media blaster;

forcing media from the media blaster, toward the seal ring, and into contact with selected locations on the seal ring to thereby form hydropads at the selected locations with the seal ring; and

mounting the seal ring in the seal assembly.

19. A method as claimed in claim 18, further comprising the step of placing a template between the seal ring and the media blaster, wherein the template includes openings, and wherein said forcing step includes forcing media from the media blaster and through the openings in the template

20. A method as claimed in claim 18, wherein said forcing step comprises the step of forcing particulate from the blaster and toward the seal ring.

21. A method as claimed in claim 18, wherein said positioning step comprises the step of mounting the seal ring on a holder.

22. A method as claimed in claim 20, further comprising the step of rotating the holder.

23. A method as claimed in claim 18, further comprising the step of starting a timer.

24. A method as claimed in claim 22, further comprising the step of stopping the media blaster after a predetermined time from said starting step.

25. A seal assembly comprising:

a first seal ring of a generally annular shape and defining radial and circumferential directions; and

a second seal ring positioned in facing relation to said first seal ring, wherein one of said first seal ring and said second seal ring includes a plurality of hydropads, said hydropads each including:

an inner edge oriented substantially circumferentially;

an outer edge oriented substantially circumferentially and spaced radially outward from said inner edge;

a leading edge interconnecting said inner edge with said outer edge, said leading edge being substantially straight and oblique to the radial direction; and

a trailing edge interconnecting said inner edge with said outer edge, said trailing edge being substantially straight and oblique to the radial direction.

26. A seal assembly as claimed in claim 25, wherein said inner edge and said outer edge are both substantially straight.

27. A seal assembly as claimed in claim 25, wherein said leading edge is positioned at an angle relative to a radial axis passing through a mid-point of said leading edge, and wherein said trailing edge is positioned at the same angle relative to a radial axis passing through a corresponding mid-point of said trailing edge.

add 33